

CLAIMS

1. A micro terminal (91) with electrical conduction between said micro terminal and an electrode of an electronic device or an inspection device, comprising a columnar
5 contactor (91a, 91c) in contact with the electrode, wherein
said contactor (91a, 91c) has a spring structure that is elastically deformed by being pressed against the electrode, and said contactor (91a, 91c) has a protrusion (1t) protruding outwardly at its end in contact with the electrode, and
said protrusion (1t) is shaped to have a part of a sphere or a paraboloid of
10 revolution.
2. The micro terminal according to claim 1, wherein said contactor (91a, 91c) has a spiral spring structure.
- 15 3. The micro terminal according to claim 1, wherein said contactor (91a, 91c) has a structure in which a plurality of meandering springs are disposed from a perimeter portion to a central portion of said contactor.
4. The micro terminal according to claim 1, wherein a perimeter portion of said
20 columnar contactor (91a, 91c) has a tubular ring structure.
5. The micro terminal according to claim 1, wherein said micro terminal (91) has said contactor (91a, 91c) at each of opposing ends in contact with the electrode.
- 25 6. The micro terminal according to claim 1, wherein said protrusion (1t) has a V-shaped groove opening toward the direction in which said protrusion protrudes.
7. The micro terminal according to claim 1, wherein said micro terminal (91) includes

nickel or a nickel alloy.

8. The micro terminal according to claim 1, wherein said micro terminal (91) has a coat layer including a precious metal or an alloy of a precious metal or
5 polytetrafluoroethylene gold.

9. A method of fabricating the micro terminal according to claim 1, wherein the contactor (91a, 91c) of said micro terminal (91) is fabricated by a method including the steps of:

10 forming a resin mold by X-ray lithography;
forming a layer including a metal material at said resin mold on an electrically
conductive substrate by electroforming;
polishing or grinding;
forming a resin mold on said layer including a metal material by lithography;
15 electroforming a layer including a metal material at said resin mold to form a
protrusion protruding outwardly;
removing said resin molds; and
removing said electrically conductive substrate.

20 10. A method of fabricating the micro terminal (91) according to claim 1, wherein the contactor (91a, 91c) of said micro terminal (91) is fabricated by a method including the steps of:

forming a resin mold by a metal mold;
forming a layer including a metal material at said resin mold on an electrically
25 conductive substrate by electroforming;
polishing or grinding;
forming a resin mold on said layer including a metal material by lithography;
electroforming a layer including a metal material at said resin mold to form a

protrusion protruding outwardly;
removing said resin molds; and
removing said electrically conductive layer.

5 11. The method of fabricating the micro terminal according to claim 9 or 10, wherein said protrusion (1t) formed is provided with a V-shaped groove formed by cutting with a dicer.

10 12. A contact sheet including the micro terminal (91) according to claim 1, having a hollow electrode (91b) penetrating the sheet in a thickness direction and said contactor (91a, 91c) on said hollow electrode (91b), wherein said hollow electrode (91b) has a hollow portion for a spring of said contactor (91a, 91c) to make a stroke.

15 13. The contact sheet according to claim 12, wherein said hollow electrode (91b) and said contactor (91a, 91c) are joined by resistance welding.

20 14. A socket for inspection including the micro terminal (91) according to claim 1, wherein said socket is used for inspection of semiconductor in land grid array arrangement.

15. An inspection device including the socket according to claim 14.

16. A method of inspecting semiconductor using the socket according to claim 14.

25 17. A connector for installation including the micro terminal (91) according to claim 1, wherein said connector is connected to a land electrode.

18. An electronic device including the connector according to claim 17.